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09/871,524	05/31/2001	Eliot M. Case	1813 USW 0611 PUS	1064

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DENVER, CO 80202

EXAMINER

LEWIS, MICHAEL A

ART UNIT	PAPER NUMBER
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2655

DATE MAILED: 07/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/871,524

**Applicant(s)**

CASE, ELIOT M.

**Examiner**

Michael A Lewis

**Art Unit**

2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 - 20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 6 is objected to because of the following informalities: The written portion of the claim seems to be missing or incomplete. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 2, 3, 11, 12 & 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Baker et al. Baker et al. (US 6092044).

Regarding claims 1 & 11, Baker et al. discloses a method of training a computer system via human voice input from a human teacher, the computer system having a text to speech engine and a speech recognition engine (Fig 2(215)), Fig 17(1762)), the method comprising: presenting a text spelling of an unknown word

(Col 2, Line 13 – 21); receiving a human voice pronunciation of the unknown word from the human teacher (Col 3, Lines 42 – Col 4, Lines 65); determining a phonetic spelling of the unknown word with the speech recognition engine based on the human voice pronunciation of the unknown word (Col 2, Line 13 – 21); and associating the text spelling with the phonetic spelling to allow the text to speech engine to correctly pronounce the unknown word in the future when presented with the text spelling of the unknown word (Col 18, Line 42 – Line 55) .

Regarding claims 2 & 12, Baker et al. discloses the phonetic spelling includes a sequence of phonemes (Col 5, Line 65 – Col 6, Line 7).

Regarding claims 3 & 13, Baker et al. discloses the phonetic spelling includes a sequence of known words (Col 6, Line 1 – Line 7).

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 4, 5, 14 & 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baker et al. (US 6092044) in view of Beutnagel (US6078885).

Regarding claims 4 & 14, are dependent on base claims 1 & 11 which are anticipated by Baker et al. for the reasons stated in the 35 U.S.C. 102(e) rejection above. Baker et al. do not disclose the presenting of the text spelling of the unknown word, the computer system, using speech output, requests to receive the human voice pronunciation of the unknown word. However, Beutnagel teaches the presenting of the text spelling of the unknown word, the computer system, using speech output, requests to receive the human voice pronunciation of the unknown word (Col 5, Lines 35 – 46). Spelling of the unknown word would increased the knowledge base of the system resulting in an improved speech recognition system

Therefore, it would have been obvious to one of ordinary skill a the time of the invention to modify Baker et al. with the text spelling of unknown word as taught

by Beutnagel since it would have increase the knowledge base of the system resulting in an improved speech recognition system.

Regarding claims 5 & 15, Baker et al. do not disclose the request from the computer system takes a form of an ongoing dialog between the computer system and the human teacher. However, Beutnagel teaches the request from the computer system takes a form of an ongoing dialog between the computer system and the human teacher (Col 5, Line 40 – 56). *[Note that the adding of a new word to a dictionary and training a system to recognize an unknown word or out of vocabulary word is equivalent]*. Training the system with dialog from a human teacher would have expanded the knowledge base of the system resulting in improved future speech recognition system

Therefore, it would have been obvious to one of ordinary skill a the time of the invention to modify Baker et al. with continuous dialog with the human teacher as taught by Beutnagel since dialog would have expanded the knowledge base of the system resulting in improved future speech recognition system.

4. Claims 6, 7, 8, 9, 10, 16, 17, 18, 19 & 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baker et al. (US 6092044) in view of Beutnagel (US6078885)

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as applied to claims 1 – 3& 11 – 13 above, and in further view of Hon et al.  
(US5852801).

Regarding claims 6 (missing text presumed from claim 16) & 16, the combination of Baker et al. and Beutnagel do not disclose a method further comprising: establishing a plurality of request statements, each request statement having an information content level, the information content levels ranging from a low information content level to a high information content level, the plurality of requests statements being used by the computer system during the ongoing dialog. However, Hon et al. teach a method further comprising: establishing a plurality of request statements, each request statement having an information content level, the information content levels ranging from a low information content level to a high information content level, the plurality of requests statements being used by the computer system during the ongoing dialog (Col 7, Lines 28 – 54). The interactive request between user [trainer] and the speech recognition system will ensure an improved accuracy for unknown or unrecognized words.

Therefore, it would have been obvious to one of ordinary skill at the time of the invention to modify the combination of Baker et al. and Beutnagel with the plurality of request information with varying content level as taught by Hon et al.

since it would have improved the accuracy of unknown words in a speech recognition system.

Regarding claims 8 & 18, the combination of Baker et al. and Beutnagel disclose deriving the phonetic spelling of the unknown word to allow the speech recognition engine to correctly recognize the unknown word in the future. The the combination of Baker et al. and Beutnagel do not disclose receiving a known word that is related in meaning to the unknown word. However, Hon et al. teach the receiving of a known word that is related in meaning to the unknown word (Col 8, Lines 9 – Lines 60). The association of known words to unknown words will help in the ability of the recognition application to develop links that can used in future use for the substitution of the unknown word *[alternative word list]*.

Therefore, it would have been obvious to one of ordinary skill at the time of the invention to modify the combination of Baker et al. and Beutnagel the receiving of a known word that is related in meaning to the unknown word as taught by Hon et al. since it would have improved the accuracy of unknown words in a future speech recognition applications where alternative words can be used.



Regarding claims 7 & 17, the combination of Baker et al. and Beutnagel do not disclose a presenting, receiving, determining, and associating are repeated for a plurality of unknown words, and wherein the information content level for the request statements in the ongoing dialog progressively lessens as presenting, receiving, determining, and associating are repeated. Hon et al. teach presenting, receiving, determining, and associating are repeated for a plurality of unknown words, and wherein the information content level for the request statements in the ongoing dialog progressively lessens as presenting, receiving, determining, and associating are repeated (Col 8, Lines 9 – Lines 60). *[Hon et al. describes the presentation of a N-best list, associated with the unrecognized word, determining a top candidate and repeating the process]*. The process of determining to associate unrecognized words by interacting continuously with the user *[trainer]* will ensure an improved accuracy for unknown or unrecognized words.

Therefore, it would have been obvious to one of ordinary skill at the time of the invention to modify the combination of Baker et al. and Beutnagel with the presenting, receiving, determining, and associating are repeated for a plurality of unknown words as taught by Hon et al. since it would have improved the accuracy of unknown words in a speech recognition system.

Regarding claims 9 & 19, the combination of Baker et al. and Beutnagel. disclose receiving the known word further comprises: receiving a human voice pronunciation of the known word from the human teacher (Baker: Col 3, Lines 42 – Col 4, Lines 65).

Regarding claims 10 & 20, the combination of Baker et al. and Beutnagel disclose receiving the known word further comprises: receiving a text spelling of the known word (Baker: Col 2, Line 13 – 21).

### **Conclusion**

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Mann	U.S. Patent (6629071)
Handal et al.	U.S. Patent Application (20030182111)
Contilini et al.	U.S. Patent (6233553)
Molnar et al.	U.S. Patent (6041300)
L'Esperance et al.	U.S. Patent Application (20020055844)
Alleva et al.	U.S. Patent (6694296)
Garberg et al.	U.S. Patent (5724481)

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Lewis whose telephone number is 703 305-8730. The examiner can normally be reached on Monday through Friday, 8:30 am – 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on (703) 305-4827. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mal

5/26/2004

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Examiner  
Art Unit 2655

W. R. YOUNG  
PRIMARY EXAMINER